	PATH	Action Log Report	Page 1 of 2
Report Date:			2020/01/13

Title:	Watercourse realignment, Sherridon mine remediation project, Sherridon
PATH File No.:	17-HCAA-00076
Habitat File No:	
Receive Date:	2017/02/07

Activity:	Site Visit	Action ID No.:	29
To:		Action Date:	May 14, 2019
From:		Document Date:	
Description:	Follow up monitoring was conducted to ensure that adequate flows and the presence of spring spawning fishes (Suckers and Walleye) were accessing and potentially spawning in Lower Sherlett Creek.		
Action:	No Change/No Action Required for this Activity		
Time Spent (Hrs):	16.00	Effective Date:	
Authorization Rationale:		Expiry Date - HADD/Serious Harm:	
		Expiry Date - Other :	
		Compensation/Offsetting:	
		Included in List of Records:	
		Species at Risk:	

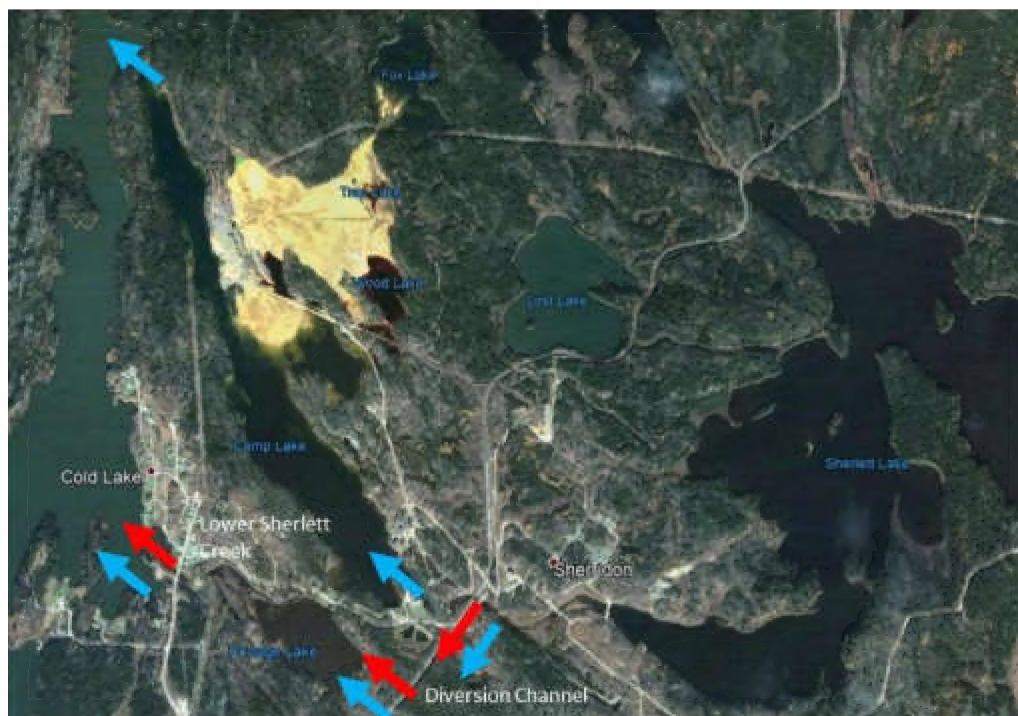
Reach	Waypoint	Easting	Northing	Wetted Width (m)	Depth (m, taken at distances from the						Velocity (m/s, taken at						Right Bank	Left Bank	Bed Material	Pictures	Fish Observations:	Overall:
					1/3	1/2	2/3	1/3	1/2	2/3	1/3	1/2	2/3	1/3	1/2	2/3						
Portage Lake Diversion Channel	2 025			4.2	0.40	0.50	0.60	1.21	0.97	0.08					Bedrock	Cobble, some overhanging vegetation	large cobble	13, 14	May 8 night: WALL along DB	Uniform width, riffle at top and bottom: Fish likely staging to move upstream		
	2 026			4.9	0.38	0.40	0.42								Undercut							
	2 027			5.5	0.35	0.47	0.38	0.86	0.59	0.34					Undercut	Undercut	Cobble					
	3 028			5.2	0.40	0.50	0.48								Bedrock		Bedrock, boulder	15 to 17		Chute in middle		
	3 029			8.3	0.35	0.38	0.60								Boulder		Boulder	18		Chute in middle		
	3 030			8.3	0.35	0.48	0.53	0.58	1.08	1.45	backwater						Boulder	19		Chute in middle		
	3 031			6	0.33	0.36	0.42	0.51	0.82	0.52	Heavily treed Sand						Boulder	20 to 22		Chute in middle		
	3 032			3.7	0.41	0.32	0.45				Heavily treed						Boulder	23 to 27				
	3 033			2.7	0.50	0.45					Heavily treed						Boulder	28 to 30				
	3 034			4.4	0.44	0.80	0.40								Boulder		Boulder	30 to 33	May 9 WALL (15" rip), WHSC	Boulder weir, top of the rapids/chute through reach 3		
Portage Lake Diversion Channel	4 035																Organic		Some boulders, very organic, lots of vegetation and floating vegetation, clear trees, probably NPK spawning habitat and migration for suckers and WALL			
	4 036																Organic		Old beaver dam			
	037																Bedrock with fines	41 to 44	Old beaver dam, lots of debris like, not a shallow marsh as expected, steep and defined banks.			
Uniform blasted channel, vertical blasted walls, no access, some flow, likely a migration corridor																						

Wetted Width	Depth	Velocity
Average	4.87	0.46
St Dev	0.65	0.08
Average	5.11	0.46
St Dev	0.88	0.11
Average	1.80	0.79
St Dev	0.33	0.33

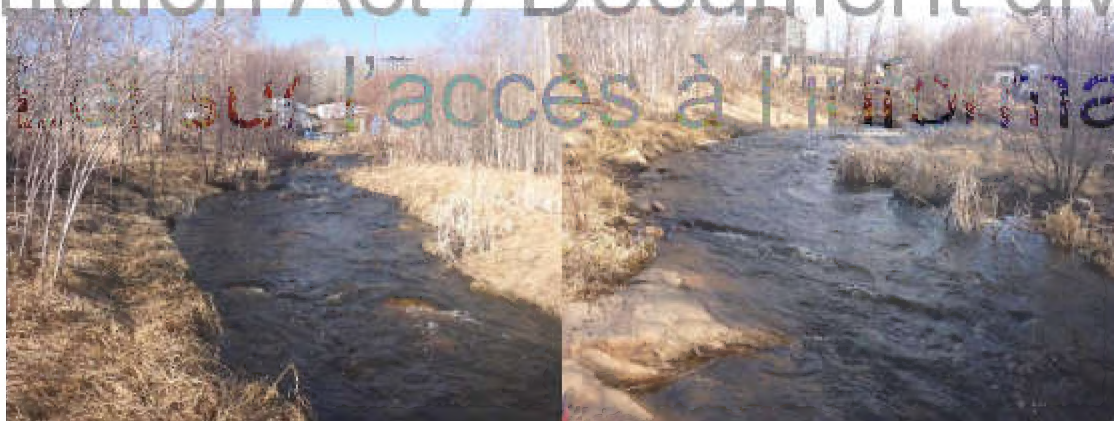
Date	Time	Reach	Species	Sex	Ripe?	Length	Observed/Caught	Count
8-May-18	Night		2 WALL		Unknown		Observed	
9-May-18	12:00		3 WALL	Male	Yes	15"	Caught	
9-May-18	12:00		3 WHSC	Male	Yes	14"	Caught	
9-May-18	15:00		3 WHSC	Male	Yes		Caught	
9-May-18	15:00		3 WHSC		Unknown		Observed	
9-May-18	15:00		3 WALL	Female	Yes		Caught	

Sherridon Sampling – May 2019 – Summary

- On May 14-15, 2019 Matt Martens and Phil Curtis conducted a site-visit to the Sherridon Mine site to determine if the rerouting of flow as proposed by the proponent (Manitoba Growth Enterprise and Trade) had the potential to cause *serious harm to fish* as a result of the reduction in flow to Lower Sherlett Creek, a confirmed spring spawning area for fishes (Walleye and Suckers) as evidenced by 2018 DFO-FHPP data;



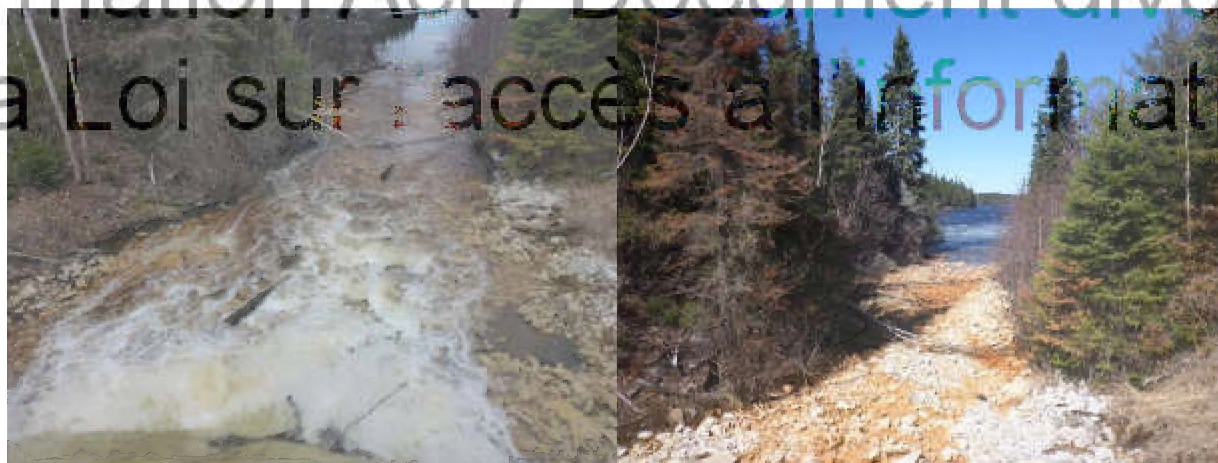
- Prior to 2019, water flowed following the red arrows (see above). Camp Lake which was used for mine tailings was isolated from the main flow coming from Sherlett Lake and a diversion channel pushed water through Portage Lake, Lower Sherlett Creek and eventually Cold Lake (Kississing Lake). As of summer 2018, under LOA 17-HCAA-00076, water was split between the diversion channel and back into Camp Lake and into Cold Lake to complete the remediation of the Camp Lake (blue arrows);
- The purpose of the 2019 sampling was to determine if the rerouting of water would diminish local fish the ability to access and utilize Lower Sherlett Creek for spring spawning and egg incubation;
- On average, wetted width in Lower Sherlett Creek was similar to previous years (DFO and Tetratech sampled; around 5 m). Water velocity at 60% depth ranged from 0.20 m/s in back-eddies to 1.11 m/s at the upstream reaches in the thalweg. Water depth within the riffles was about 0.30 m and water temperature ranged from 9.4 to 9.9 degrees Celsius. Below I have included a photo from a similar vantage point for 2019 (left) and 2018 (right) in Reach 2 of Lower Sherlett Creek for reference;



- Approximately 30 Walleye on each night (in spawning condition – looked to be mostly males) and 100's of White Sucker and Longnose Sucker also in spawning condition were observed staging in all reaches of the creek as well as upstream all the way to the stop log control structure at the outfall of Sherlett Lake;
- Fish were also observed staging at the newly notched cofferdam into Camp Lake. The capped culverts into the diversion channel seemed to be functioning well (pictures below);



- The newly opened outlet to Camp Lake was also flowing at a steady rate and sucker and one Northern Pike were staging below the outlet. Below is a photo from 2019 (left) and 2018 (right);



- Finally, there was an observable difference (visually) in water quality in 2019 (left) versus 2018 (right) in Camp Lake since water had been diverted;



Conclusion

As proposed, the partial diversion of flows into Camp Lake from Sherlett Lake have not shown significant evidence of reducing the viability of Lower Sherlett Creek as spawning habitat for spring-spawning fishes from observations collected this year.